

**FRIEDMAN & BRUYA, INC.**

**ENVIRONMENTAL CHEMISTS**

Date of Report: 04/03/98  
Date Received: 03/12/98  
Project: Waste Sulfuric, PO# M10360  
Date Analyzed: 03/18/98

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE  
FOR % ACID**

Results Reported as Percent Acid by Volume

<u>Sample ID</u>	<u>% Acid</u>
M10360	2.4

**FRIEDMAN & BRUYA, INC.**

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**Date Received: 03/12/98**

**Project: Waste Sulfuric, PO# M10360**

**Date Analyzed: 03/18/98**

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE  
FOR pH**

**Sample ID**

**pH**

**M10360**

**1.6**

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Date of Report: 04/03/98  
Date Received: 03/12/98  
Project: Waste Sulfuric, PO# M10360  
Date Extracted: 03/27/89  
Date Analyzed: 04/02/98

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE  
FOR SPECIFIC GRAVITY  
@ 15.56 °C**

Sample ID

Specific Gravity

M10360

1.08

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/03/98  
Date Received: 03/12/98  
Project: Waste Sulfuric, PO# M10360  
Date Extracted: 03/31/98  
Date analyzed: 04/02/98

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE  
FOR FINGERPRINT CHARACTERIZATION  
BY INDUCTIVELY COUPLED PLASMA (ICP)  
EMISSION SPECTROSCOPY**

**Samples Processed Using Method 3050**

The Metals Were Found at Approximate Levels Indicated  
Results Reported as mg/l(ppm)

Sample ID: M10360

Aluminum	60 ppm	Nickel	90 ppm
Antimony	<50 ppm	Palladium	<25 ppm
Arsenic	<50 ppm	Phosphorous	<100 ppm
Barium	<25 ppm	Platinum	<50 ppm
Beryllium	<25 ppm	Rhenium	<25 ppm
Boron	<25 ppm	Selenium	<50 ppm
Cadmium	10 ppm	Silicon	<25 ppm
Calcium	250 ppm	Silver	<25 ppm
Chromium	10 ppm	Sodium	210 ppm
Cobalt	<25 ppm	Strontium	<25 ppm
Copper	7,400 ppm	Thallium	<50 ppm
Gold	<25 ppm	Tin	<25 ppm
Iron	210 ppm	Titanium	<25 ppm
Lead	<50 ppm	Vanadium	<25 ppm
Magnesium	40 ppm	Zinc	9,700 ppm
Manganese	20 ppm	Zirconium	<50 ppm
Mercury	<25 ppm		
Molybdenum	<50 ppm		

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**Project: Waste Sulfuric, PO# M10360**

**QUALITY ASSURANCE RESULTS FOR  
THE ANALYSIS OF WATER SAMPLES  
FOR TURBIDITY AND pH**

**Laboratory Code: 801109-09 (Duplicate)**

<b>Analyte</b>	<b>Reporting Units</b>	<b>Sample Result</b>	<b>Duplicate Result</b>	<b>Relative Percent Difference</b>	<b>Acceptance Criteria</b>
pH		5.0	5.1	2	0-20

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**Project: Waste Sulfuric, PO# M10360**

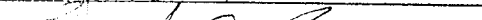
**QUALITY ASSURANCE RESULTS  
FOR SPECIFIC GRAVITY**

**Laboratory Code: 803055-01 (Duplicate)**

<b>Analyte</b>	<b>Sample Result</b>	<b>Duplicate Result</b>	<b>Relative Percent Difference</b>	<b>Acceptance Criteria</b>
<b>Specific Gravity@ 15.56°C</b>	<b>1.08</b>	<b>1.09</b>	<b>1</b>	<b>0-20</b>

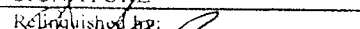

PJA 803055  
SAMPLE CHAIN OF CUSTODY

KJ AI  
3-12-98  
2:45

SITE NO.	PROJECT NAME	PURCHASE ORDER #
	WASTE Sub/Service	M 10360
SAMPLERS (signature)	PROJECT LOCATION	
	3405	

REMARKS	SAMPLE DISPOSAL INFORMATION	
	<input checked="" type="checkbox"/>	Dispose after 30 days
	<input type="checkbox"/>	Return Samples
	<input type="checkbox"/>	Call for Instructions

[illegible]

SIGNATURE	PRINT NAME	COMPANY	Date	Time
Relinquished by: 	Gerald Thompson	Aew	3/12/98	11:00
Received by: 	KURT JOHNSON	F&B, I	3/12/98	11:00
Relinquished by:				
Received by:				

**FRIEDMAN & BRUYA, INC.**

**ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D.  
Charlene Jensen, M.S.  
Bradley T. Benson, B.S.  
Kurt Johnson, B.S.

3012 16th Avenue West  
Seattle, WA 98119-2029  
TEL: (206) 285-8282  
FAX: (206) 283-5044  
e-mail: fbi@isomedia.com

**April 3, 1998**

**DUPLICATE COPY**  
**INVOICE #98ACU0403-2**

Accounts Payable  
Alaskan Copper Works  
628 South Hanford St.  
Seattle, WA 98134

**RE: Project Waste Sulfuric, PO# M10630: Results of testing requested by  
Gerry Thompson for material submitted on March 12, 1998.**

1 water sample analyzed for Percentage of Acid @ \$25 per sample	\$ 25.00
1 water sample analyzed for pH @ \$10 per sample	10.00
1 water sample analyzed for Specific Gravity @ \$25 per sample	25.00
1 water sample analyzed for Metal Scan using Method 6010 @ \$100 per sample	<u>100.00</u>
Amount Due .....	\$ 160.00

FEDERAL TAX ID (b) (6)



**FRIEDMAN & BRUYA, INC.**

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Seattle, WA 98119-2029  
TEL: (206) 285-8282  
FAX: (206) 283-5044  
e-mail: fbi@isomedia.com

**April 3, 1998**

**Gerry Thompson, Project Manager  
Alaskan Copper Works  
628 South Hanford St.  
Seattle, WA 98134**

**Dear Mr. Thompson:**

**Included are the results from the testing of material submitted on March 12, 1998  
from your Waste Sulfuric, PO# M10360 project.**

**We appreciate this opportunity to be of service to you and hope you will call if you  
should have any questions.**

**Sincerely,**

**FRIEDMAN & BRUYA, INC.**



**Manuel Marti  
Project Manager**

**Enclosures  
ACU0403R.DOC**